

Highland Slate™

16

YOUR OBJECTIVE:

To learn the correct method for installing Highland Slate™.

HIGHLAND SLATE™

This shingle is a "better" quality roofing products. This means that when offering a choice of "good," "better" and "best" products, this shingle would fall in the "better" category. Highland Slate™ is an oversized (18" x 36") designer shingle with an 8" exposure that replicates blended slate, and is also available in an impact-resistant version. **Highland Slate shingles are built to meet dimensional tolerances of ± 1/16".**

NOTE: For the UL 2218 Class 4 Impact Resistance Classification to be applicable, Highland Slate IR and any impact resistant hip and ridge accessory shingles must not be applied over:

- An existing roof (must be applied directly to the roof deck).
- A shingle-over ridge vent, and
- Deck spaces greater than 1/4".

Not following any one of these requirements may jeopardize the building owner's ability to qualify for an insurance rate reduction (in regions where available).

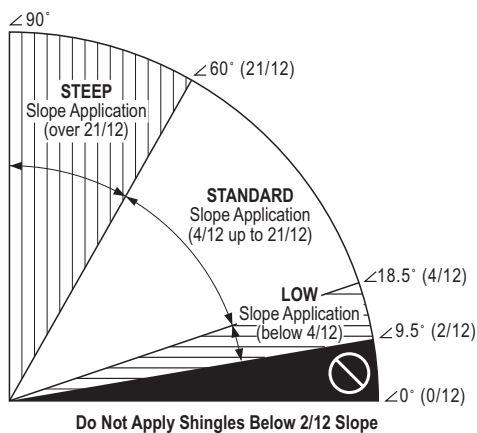


Figure 16-1: Slope definitions.

STANDARD OR STEEP SLOPES: CertainTeed recommends DiamondDeck™ Synthetic Underlayment, Roofers' Select™ High Performance Underlayment, or shingle underlayment meeting ASTM D226, D4869 or D6757. Take care to ensure sufficient deck ventilation when DiamondDeck or other synthetic underlayment is installed.

LOW SLOPES: One layer of CertainTeed's WinterGuard™ Waterproofing Shingle Underlayment (or equivalent, meeting ASTM D1970) or two layers of 36" wide felt shingle underlayment (Roofers' Select or underlayment product meeting ASTM D226, D4869 or D6757) lapped 19" must be applied over the entire roof; ensure sufficient deck ventilation. When DiamondDeck or other synthetic underlayment is installed, weather-lap at least 20" and ensure sufficient deck ventilation.

THE ROOF DECK* MUST BE AT LEAST: 3/8" (9.5 mm) thick plywood, or 7/16" (11 mm) thick non-veneer, or nominal 1" (25 mm) thick wood deck.

COLD WEATHER CLIMATES (ALL SLOPES): Application of WinterGuard or its equivalent is strongly recommended whenever there is a possibility of ice build-up. Follow manufacturer's application instructions.

FLASHING: Corrosion-resistant flashing must be used to help prevent leaks where a roof meets a wall, another roof, a chimney or other objects that penetrate a roof.

SEALING: Shingle sealing may be delayed if shingles are applied in cool weather and may be further delayed by airborne dust accumulation. If any shingles have not sealed after a reasonable time period, hand sealing may be necessary.

CAUTION: To prevent cracking, shingles must be sufficiently warm to allow proper forming for hips, ridges and valleys.

WARRANTY: These shingles are warranted against manufacturing defects and are covered by SureStart™ protection. See the warranty itself for specific details and limitations.

* For technical questions, information on acceptable alternative application methods and materials, or a copy of the product warranty, contact the sources listed below:

	Warranty	Alternate Instructions	Technical Questions
Your supplier or roofing applicator	✓		
CertainTeed Home Institute 800-782-8777	✓	✓	
CertainTeed-RPG Technical Services 800-345-1145	✓	✓	✓

FASTENING

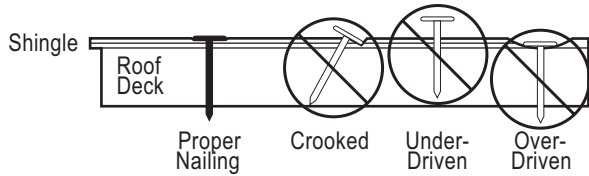


Figure 16-2: Proper and improper nailing.

For decks $\frac{3}{4}$ " (19 mm) thick or thicker, nails must go at least $\frac{3}{4}$ " (19 mm) into the deck. On thinner decks, nails must go at least $\frac{1}{8}$ " (3.2 mm) through the deck.

Nails must be 11- or 12-gauge roofing nails, corrosion-resistant, with at least $\frac{3}{8}$ " (9.5 mm) heads, and at least $1\frac{1}{4}$ " (32 mm) long.

LOW AND STANDARD SLOPE:

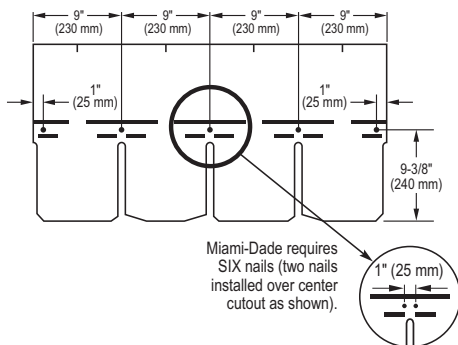


Figure 16-3: Use FIVE nails for every Highland Slate shingle. For Miami-Dade, SIX nails are required (see inset).

STEEP SLOPE:

Use **FIVE** nails and **EIGHT** spots of asphalt roofing cement* for each full Highland Slate shingle. For Miami-Dade, **SIX** nails are required. Apply 1" diameter spots of asphalt roofing cement under each tab corner. Asphalt roofing cement meeting ASTM D4586 Type II is suggested.

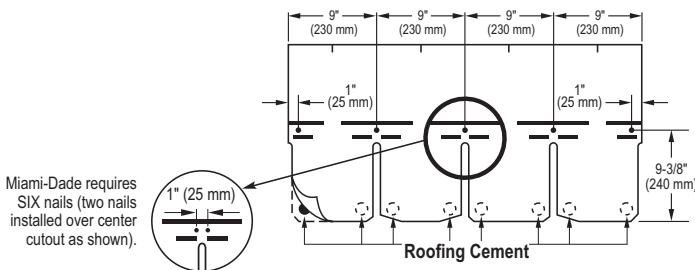


Figure 16-3A: Use FIVE nails and eight spots of asphalt roofing cement under each tab corner.

***CAUTION:** Excessive use of roofing cement can cause shingles to blister.

CLEAN DECK APPLICATION METHOD

PREPARING THE DECK:

- ◆ Apply underlayment as required. CertainTeed suggests that a layer of shingle underlayment be applied. For UL fire rating, underlayment is generally required. Apply flat and unwrinkled.

INSTALL ON NEW ROOFS AND TEAR-OFFS USING THE FOLLOWING METHOD:

- ◆ $4\frac{1}{2}$ " Single Column Vertical Racking Method.

ALIGNMENT: Snap horizontal and vertical chalklines to assure shingles will be correctly aligned. Expose all shingles 8".

STARTER COURSE:

IMPORTANT!

1. Use CertainTeed's High-Performance Starter Shingles or remove the lower 8" tab portions from Highland Slate shingles. **This is a requirement in order to be eligible for the 110 mph wind warranty.** Do not rotate or "flip" full shingle. Sealant stripes must be at lower-most edge.
2. Cut $4\frac{1}{2}$ " off the LEFT end of the first starter shingle only.
3. Apply the $31\frac{1}{2}$ " remaining piece to the lower left corner of the roof. Make sure there is $\frac{1}{2}$ " overhanging the rakes and eaves if drip edge is being used. If you are not using drip edge, make the overhang $\frac{3}{4}$ ". Install nails approximately 3" up from eave, assuring they go into solid wood.
4. Use full $36"$ long by $10"$ wide starter shingles for the rest of the course.

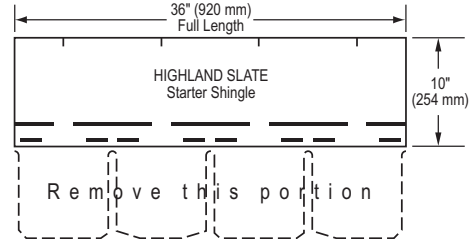


Figure 16-4: Make starter shingles by removing the lower 8" portion.

1ST COURSE: (Figure 16-6). Apply a full Highland Slate shingle at the lower left corner of the roof, flush with the starter course left corner. Fasten with 5 nails.

2ND COURSE: (Figure 16-6). Cut $4\frac{1}{2}$ " off the left end of a full shingle and apply remaining $31\frac{1}{2}$ " piece over left edge of 1st course. Fasten with 5 nails and ensure 8" exposure.

SUCCEEDING COURSES: Begin application of the 3rd course with a full shingle. Fasten with 4 nails, **leaving the right end unfastened until later.** (Figure 16-6). Begin the 4th course using a shingle with $4\frac{1}{2}$ " cut off its left end. (Figure 16-7, A). Fasten with 5 nails. To begin the application of subsequent courses, alternate full shingles [36"] and cut shingles [31-1/2"] up the rake edge, fastening as described above. (Figure 16-7, A).

REMAINING COLUMNS AND COURSE COMPLETION:

(Figure 16-7, B). Apply a full shingle against the right edge of each shingle in previous column. When applying a shingle against a covered shingle, carefully lift the right edge of the shingle above and slip the new shingle under it. Fasten as usual with 5 fasteners; then, fasten the loose right edge of the shingle above.

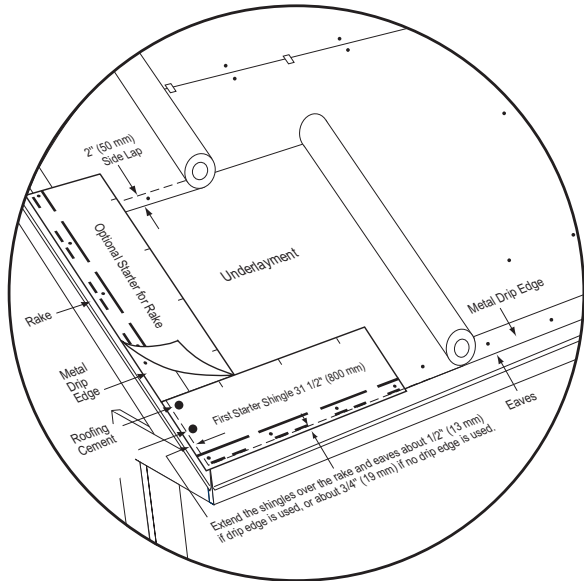


Figure 16-5: Standard slope underlayment and starter drip edge details.

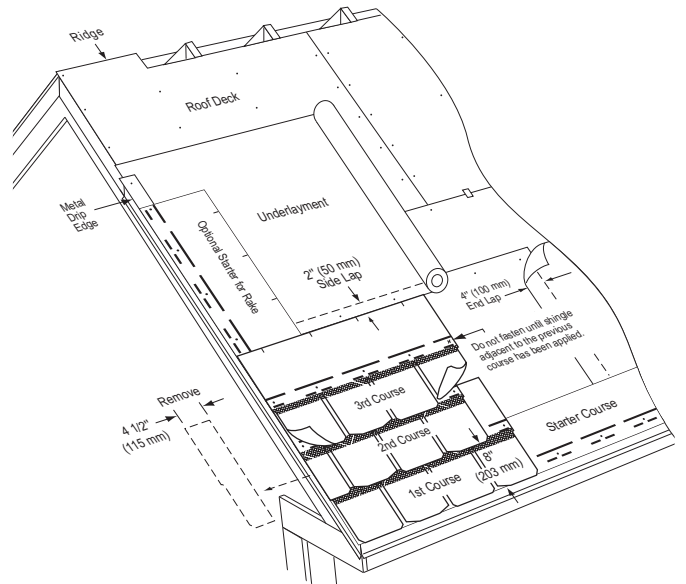


Figure 16-6: Applying the first three courses on a standard slope.

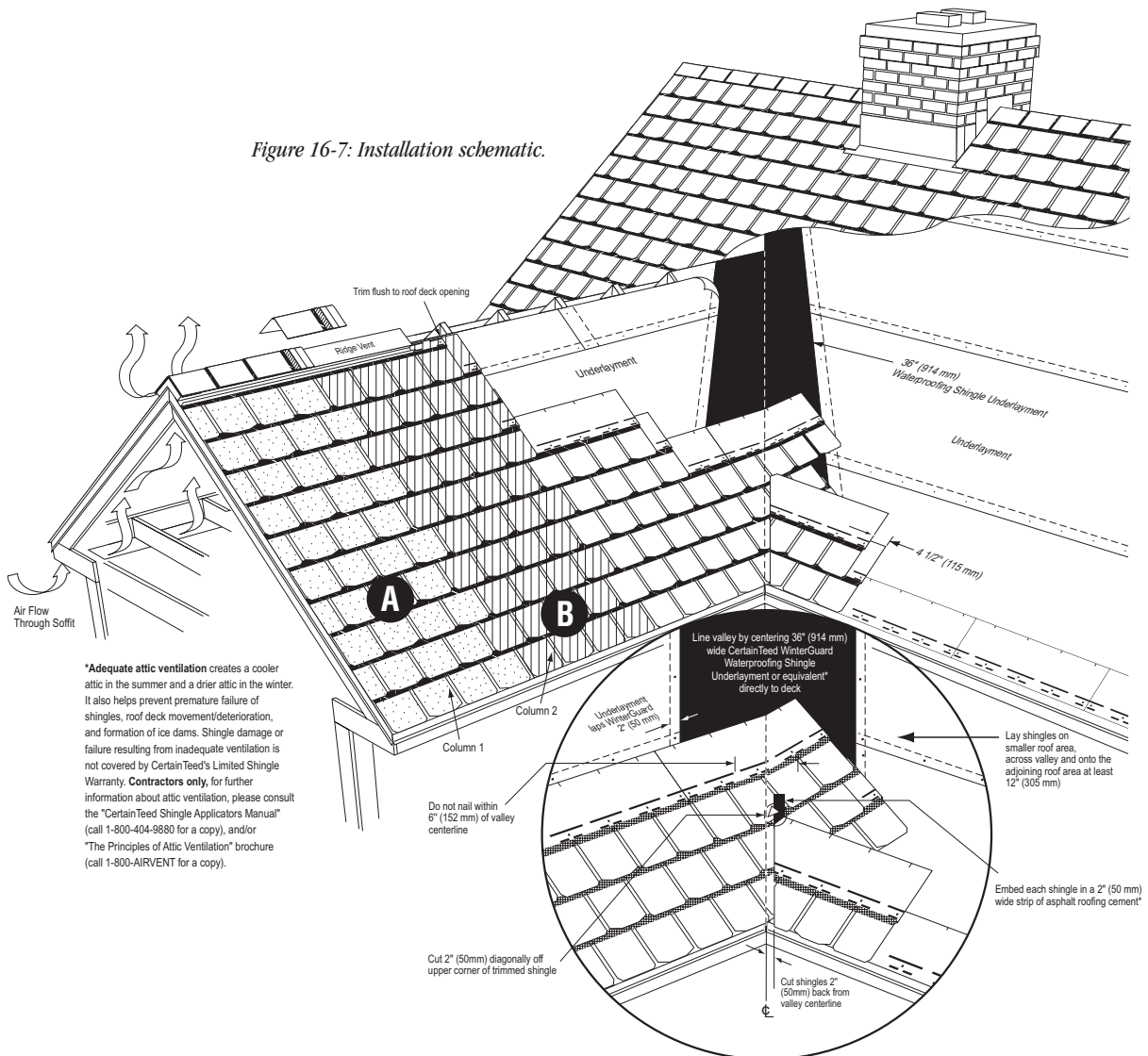


Figure 16-7: Installation schematic.

Figure 16-8: Highlight of closed-cut valley detail.

*Adequate attic ventilation creates a cooler attic in the summer and a drier attic in the winter. It also helps prevent premature failure of shingles, roof deck movement/deterioration, and formation of ice dams. Shingle damage or failure resulting from inadequate ventilation is not covered by CertainTeed's Limited Shingle Warranty. **Contractors only**, for further information about attic ventilation, please consult the "CertainTeed Shingle Applicators Manual" (call 1-800-404-9880 for a copy), and/or "The Principles of Attic Ventilation" brochure (call 1-800-AIRVENT for a copy).

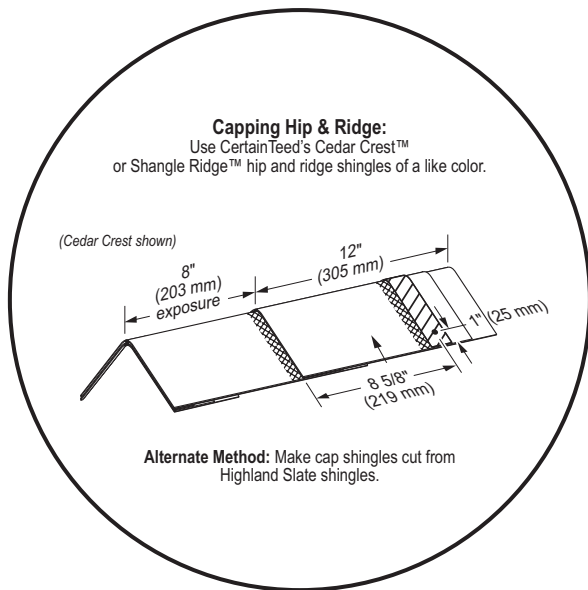


Figure 16-9: Installation of caps along hips and ridges (See chapters 12 and 17 for application instructions for Cedar Crest and Shangle Ridge respectively).

ROOFING OVER APPLICATION

“TEAR OFF”

It is important to determine that the roof deck is in satisfactory condition and the load-bearing capacity is adequate for application of these shingles. If the old roof consists of two or more layers of shingles, or if the roof consists of wood shingles (other than sawn square butt style), it is required to tear off (remove) existing roofing. If the old shingles have exposure lengths other than 8" (203 mm), it is strongly recommended to tear off existing roofing, since roofing over these shingles can lead to periodic patterns which may have an objectionable appearance. After tear-off, repair decking and/or install new decking, and apply underlayment, eaves flashing and shingles according to procedure in “4-1/2" Single Column Vertical Racking Method” section.

“ROOF-OVER” OVER ASPHALT SHINGLES:

IMPORTANT: If Highland Slate shingles are applied over existing asphalt roofing shingles having exposure lengths other than 8" (203 mm) CertainTeed requires using the nesting method described below. Never apply Highland Slate shingles over laminates or lock-type shingles. Failure to follow these directions will cause shingle “bridging” that can give an objectionable appearance and reduce the performance of the roofing.

CUTBACK/NESTING METHOD

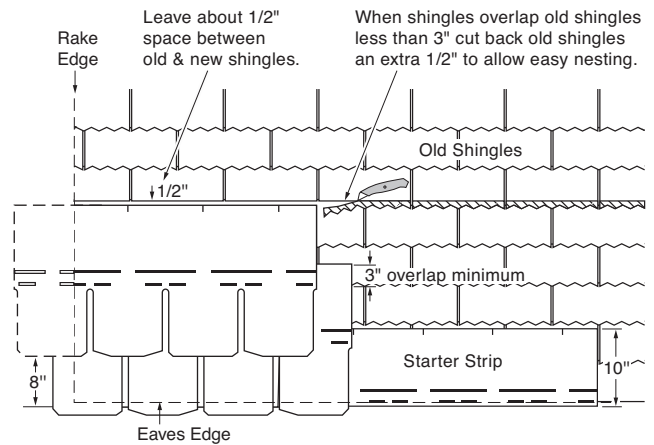


Figure 16-10: “Cutback/Nesting Method”

- 1) Make the surface of the old roof as smooth as possible by replacing missing shingles. Split and nail flat all buckled, raised or curled shingle tabs.
- 2) Cut old shingles back flush to the rakes and eaves.
- 3) Apply corrosion-resistant drip edge along the rakes and eaves, covering the edges of the old shingles.
- 4) Starter Course: If applying over old 5" exposure shingles, prepare starter strip according to Highland Slate application instructions. Apply starter strip with sealant near bottom edge so that the top edge of the starter strip will nest below the lower edge of the third course of old shingles. Starter shingle should overhang eaves and rake edges about 1/2". If applying over shingles of other than 5" exposure, apply CertainTeed High-Performance™ 10" starter in a similar fashion, with the sealant near the eaves. Follow the cut-back/nesting method described below if the top edge of the starter shingle overlaps the old shingles less than 3".
- 5) Remainder of Roof: Apply Highland Slate shingles using the 4 1/2" single column vertical racking method. When Hatteras shingles overlap the old shingles less than 3", cut back old shingles to the overlap dimension plus about 1/2", to allow easy nesting. This “Cutback/Nesting Method” permits the upper part of the Highland Slate shingle to lay smoothly against the old shingles, resulting in a roof that will perform better and have a more even appearance.

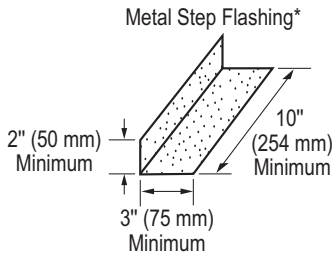
OVER SQUARE-BUTT WOOD SHINGLES:

If the roof consists of square-butt sawn wood shingles, apply beveled wood strips to obtain an even base and apply underlayment, eaves flashing and shingles according to procedure in “4-1/2" Single Column Vertical Racking Method” section.

METAL STEP FLASHING

The first course of metal flashing must be a minimum of 5" x 12" (125 mm x 305 mm), bent as shown in *Figure 16-11*, applied flush with the lowermost edge of the first shingle.

Succeeding courses of flashing must consist of pieces that are a minimum 5" x 10" (125 mm x 250 mm), bent as shown in *Figure 16-11*. Place each piece of flashing 2" (50 mm) up the roof from where the lowermost edge of the next (overlapping) shingle will be applied. Each succeeding course of flashing must "overlap" the flashing course below it a minimum of 2" (50 mm).



Metal Step Flashing*:

First course of metal flashing must consist of a minimum 5" x 12" (127 mm x 305 mm) piece applied flush with the lowermost edge of the first shingle. Succeeding courses of flashing must consist of pieces that are a minimum 5" x 10" (127 mm x 254 mm) in size. Each succeeding course of flashing must "overlap" the flashing course beneath it a minimum of 2" (50 mm).

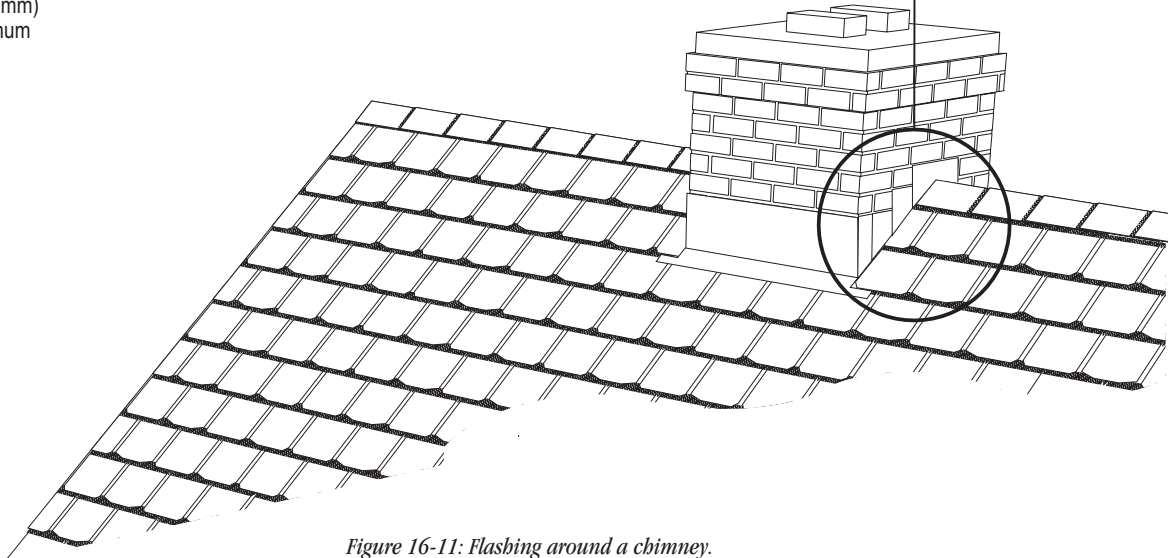
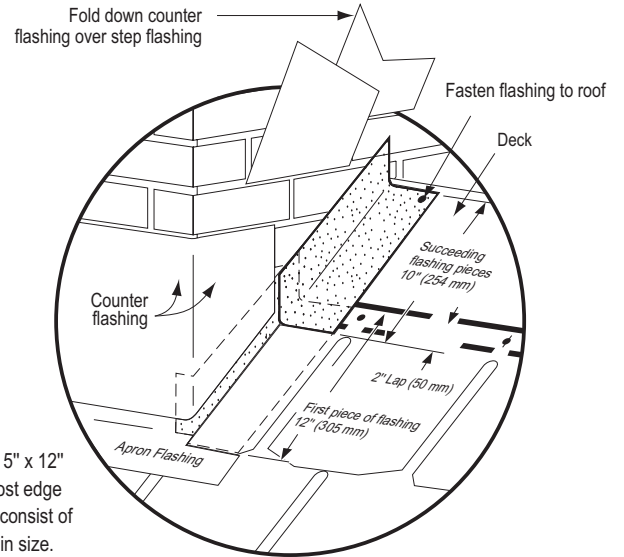


Figure 16-11: Flashing around a chimney.